Work Task C4: Southwestern Willow Flycatcher Feather Colorimetry Study

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**Purpose:** To determine if southwestern willow flycatchers (SWFL) can be

identified to subspecies in the field by using colorimetry

methodology.

**Conservation Measures:** MRM1 and MRM2

**Long-term Goals:** Field data will be collected, in conjunction with the SWFL life

history studies and the Monitoring Avian Productivity and Surviviorship (MAPS) program, during the 2005 breeding season. A manuscript will be submitted to a peer-reviewed journal by March 2006. If successful, this technique may be used to

differentiate between subspecies when monitoring and evaluating

restoration projects in the future.

**FY05 Estimate:** A modification of Reclamation's contract with SWCA to conduct

presence/absence surveys and life history studies on SWFL along the LCR has been initiated to test the effectiveness of colorimetry in determining subspecies of willow flycatchers. FY05 cost estimates are approximately \$21,000 including field support and

quality assessment.

**Project Description:** The SWFL is a polytypic species, with four subspecies generally

recognized. At least two, and possibly three, subspecies utilize the LCR during migration. One subspecies, the SWFL, is listed on federal and state endangered or sensitive species lists and is a LCR MSCP covered species. Distinguishing subspecies in the field has been problematic. Recently, new technology (colorimetry) has been described as a reliable method for characterizing plumage coloration differences in birds and may be useful in distinguishing

willow flycatcher subspecies in the field.

Accomplishments

to date: In 2004, U. S. Geological Survey analyzed data collected by

cooperators to evaluate the potential use of colorimetry and

expressed the need for this study.